



98-1-311IP

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Newell. Et al.

Serial No.: 09/413,923

Art Unit: 2879

Filed: 10/07/1999

Examiner: Haynes, M.

For: MERCURY-FREE METAL HALIDE ARC LAMPS

Assistant Commissioner for Patents

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August 26, 2002
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APPEAL BRIEF UNDER 37 C.F.R. 1.192

Applicants hereby present to the Board Of Appeals their Brief in support of their Appeal from the decision of the Primary Examiner finally rejecting Claims 1, 3 and 5, in the above-identified application. Please charge the \$320.00 fee to Deposit Account No. 15-0685. A triplicate of this page is enclosed for Fee purposes.

Three copies of the Brief are enclosed.

REAL PARTY IN INTEREST

The real party in interest in this appeal is OSRAM SYLVANIA Inc., a wholly owned subsidiary of Siemens AG.

RELATED APPEALS AND INTERFERENCES

There are no appeals or interferences pending which are related to the instant appeal.

STATUS OF THE CLAIMS

Claims 2 and 4 have been cancelled.

No claims have been allowed.

Claims 1, 3 and 5 have been rejected.

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Claims 1, 3 and 5 are appealed. These claims are delineated in the Appendix attached hereto.

STATUS OF AMENDMENTS

All amendments have been entered.

SUMMARY OF INVENTION

The invention is a mercury-free metal halide lamp having an aspect ratio, i.e., the arc length divided by the bore diameter, of greater than 5, (Figs. 2a, 2b and 3) a buffer gas of xenon, argon or krypton and a selection of metal iodides including sodium, scandium, lithium and cesium. (Specification, page 3, lines 21-30). Additionally, the arc chamber or vessel is comprised of fused silica having pinched-sealed ends. (Specification, page 5, lines 7-10).

ISSUES

Whether Claims 1, 3 and 5 are patentable under 35 U.S.C. §103(a) over the teachings of Dakin et al. (4,757,236) in view of Russell et al. (5,394,057).

GROUPING OF CLAIMS

The claims will stand or fall together.

ARGUMENTS

35 U.S.C. 103

Claims 1, 3 and 5, all of the remaining claims in this application, are rejected under 35 U.S.C. §103(a) as being obvious in view of the combination of Dakin et al. and Russell et al. The rejection is in error and its reversal is respectfully requested.

Dakin et al., while mentioning the existence of metal halide lamps generally and even characterizing their invention as a metal halide lamp, relates and teaches only a high pressure sodium iodide lamp which may or may not include one other metal halide

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(see Dakin et al., col. 1, line 68 through col. 2, line 1; col. 2, lines 14-16; and col. 3, lines 37-39). At col. 4, lines 65-68, Dakin et al. state that other metal halides can be added to the fill to improve color; however, no other materials are mentioned. At the end of their list of Examples, at col. 4, lines 59 et seq., Dakin et al. state:

"The foregoing describes a high pressure sodium iodide arc lamp and a fill for such lamp wherein xenon is chosen as the buffer gas rather than mercury, as in conventional arc lamps."

Clearly, even Dakin et al. recognize that they are disclosing a high-pressure sodium lamp and not a metal halide lamp, as that term is generally employed in the art. See, for example, the additionally cited Russell patent, which does relate to what the industry considers a metal halide lamp.

The Examiner states in the Final Rejection, at page 2, 4th paragraph, that Dakin et al. show a metal halide lamp having pinched-sealed ends. This statement is incorrect, as the Examiner recognizes at the top of page 3, wherein it is stated that Dakin et al. do not discuss pinch seals at all. Fig. 3 of Dakin et al. clearly shows an arc tube comprised of polycrystalline alumina, which is why the end caps are necessary. To remedy this deficiency of a lack of pinch-seal teaching, Russell et al. is cited.

Further down in the above-mentioned 4th paragraph, the Examiner states that Dakin et al. disclose a fill selected from the group consisting of sodium, scandium, lithium or cesium. This statement also is in error. The only other halide mentioned in Dakin et al. is scandium iodide and it appears only in reference to Dakin et al. Example IV. Its purpose is not disclosed.

Clearly, the only suggestion for the instant claimed metal halide lamp with its unique arc tube configuration, specific fill and mercury-free environment comes from the instant application and this teaching is not available to the Examiner.

"In determining obviousness of claimed apparatus under 35 U.S.C. 103, it is improper to modify reference in light of applicant's own disclosure." Ex parte Camarata; 151 USPQ 739; PO Bd of App; Mar. 1 and May 17, 1966.

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"Fact that disclosures of references can be combined does not make combination obvious unless the art also contains something to suggest desirability of combination." In re Imperato; 179 USPQ 730; CCPA; Nov. 15, 1973.

In response to a previous Office Action the instant claims were amended to clarify the invention and to advance prosecution by adding the limitations that the arc vessel is constructed of fused silica and has pinch-sealed ends. The Examiner dismisses these additions as obvious design choices, apparently because applicants' disclosure fails to state that these features solve a stated problem outside the scope of the art.

This conclusion of the Examiner's is incorrect on two grounds.

First, it is pointed out that the art does not show metal halide arc lamps containing more than two halides and with aspect ratios greater than 5, with or without pinched-seal ends; therefore, the art does not evidence such a choice.

"It is quite clear from the art cited that it does not show the invention nor suggest the same. The examiner's rejection is based on the assertion that it is a mere matter of choice...

However, applicant has a new means to accomplish the result..." Ex parte Krantz; 61 USPQ 238; Patent Office Board of Appeals; Oct. 12, 1943.

And:

"The examiner then says that these are a matter of choice. It is not a matter of choice presented by the prior art. The prior art gives only one choice; a process which will not yield these new and improved results." Ex parte Haas, Connelly, and Van Voorhis; 144 USPQ 98; Patent Office Board Of Appeals; Mar. 19, 1964.

Second, under the circumstances enumerated above it is believed to be improper for the criticality of matter added to advance prosecution to be required.

"There is no reason for requiring showing of criticality of limitation which finds support in original disclosure, which is added to claims for purposes of advancing prosecution of application, and which is never alleged by applicant to be critical; if applicant under these circumstances narrows scope of claims, he should be entitled to do so without being required to prove criticality." In re Luvisi and Nohejl; 144 USPQ 646; CCPA, Mar. 11, 1965

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As to the further comments concerning Claim 5, it is pointed out that Claim 5 depends from Claim 3 and requires a lamp having an aspect ratio greater than 5, a particular fill, a particular arc vessel that has a mercury-free environment and a ballast supplying between 250 and 400 watts to operate the lamp. The Examiner's statement that Dakin et al. inherently comprise such a ballast is incorrect. All of the Examples of Dakin et al. lamps were run at 500 to 550 watts and there is no suggestion that the Dakin et al., lamps could be run at lower wattages. As noted in the instant specification at page 3, lines 1-5, lamps designed as claimed herein produce starting voltages of 40 to 50 volts. At currents of 5 to 7 amperes these lamps consumed about 250 to 400 watts, which was sufficient to raise the operating temperature of the lamps to suitable values. This feature is clearly lacking in Dakin et al. and there is no suggestion in Dakin et al. that their lamps would operate at such levels.

CONCLUSION

According, it is believed that error was made in the rejection of the pending claims under 35 U.S.C. §103(a) and reversal of the rejections and allowance of the claims is respectfully solicited.

Respectfully submitted,



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APPENDIX

1. A mercury-free, arc vessel constructed of fused silica having a pinched-seal at each end and having an aspect ratio greater than 5 and containing a fill comprised of iodides selected from the group consisting essentially of sodium, scandium, lithium, cesium and a buffer gas selected from the group consisting of xenon, argon and krypton.

3. A mercury-free, metal halide lamp comprising; an outer envelope containing an atmosphere selected from the group consisting of vacuum and nitrogen; and an arc discharge vessel constructed of fused silica having a pinched-seal at each end and mounted therein; said vessel having an aspect ratio greater than 5 and containing a fill comprised of iodides selected from the group consisting of sodium, scandium, lithium or cesium and a buffer gas of from about 50 torr to 500 torr selected from the group consisting of xenon, argon and krypton.

5. The lamp of Claim 3 wherein said lamp is operated by a ballast supplying power to operate said lamp between approximately 250 watts and 400 watts.